

CALIFORNIA COASTAL COMMISSION

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STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY CERTIFICATION

Consistency Certification No.:	CC-048-04
Staff:	MPD-SF
File Date:	7/1/2004
3 Months:	10/1/2004
6 Months:	1/1/2005
Extended to:	2/10/2006
Commission Meeting:	2/9/2006

APPLICANT: North County Transit District¹

DEVELOPMENT

LOCATION:

Between 15th Street and the southern end of Del Mar, Del Mar, San Diego County (Exhibits 1-2)

DEVELOPMENT

DESCRIPTION:

Construction of Del Mar Bluffs Stabilization Project (Exhibits 3-6)

SUBSTANTIVE FILE

DOCUMENTS:

See page 22.

[Staff Note: The staff is recommending conditional concurrence. NCTD has agreed conceptually to many of the recommended conditions, and most of the condition language was taken from previous Commission permit decisions to which NCTD has previously agreed (Exhibit 8), or from NCTD/SANDAG's agreement with the City of Del Mar for this project (Exhibit 7). If NCTD agrees to incorporate the conditions as part of the project description, the recommendation may be changed to concurrence with the project as modified. If NCTD does not agree to the conditions, the staff recommendation, if adopted by the Commission, would be treated as an objection.]

¹ All references in this report to NCTD are intended to also apply to SANDAG (San Diego Association of Governments), which has, relatively recently, assumed a number of responsibilities over NCTD activities, and which is the primary regional transportation planning agency for San Diego County. Where SANDAG has assumed project responsibilities, it would be bound by any agreements and requirements to which this project is subject.

EXECUTIVE SUMMARY

The North County Transit District (NCTD) proposes to install soldier piles within the existing railroad right-of-way along a 1,400 ft. stretch of bluffs in the City of Del Mar, San Diego County. Up to 145 piles would be installed at eight separate locations within a 1.6 mi. section of right-of-way, between 15th Street and the southern end of Del Mar. The soldier piles would be 30-36 inches wide, spaced approximately 10 ft. apart (at their centerlines), and would be placed into stable foundation material (i.e., 30-60 ft. deep). The areas selected have been prioritized and are those NCTD believes are currently most in need of stabilization based on studies performed for the project. The project is intended as a short- to intermediate-term (i.e., 20-year) solution to track protection; in the long term, one option is to relocate the tracks inland into a tunnel.

Given the inevitability of continuing erosion of the bluffs, important questions raised by the project include:

- (1) What will happen when the buried soldier piles become exposed?
- (2) Will installing the piles into the bluff preclude options for long-term solutions?
- (3) In the event the long-term plan is to relocate the tracks, will the piles be removed?
- (4) If so, when and how will they be removed, and can they be removed without further destabilize the bluff?

Both the City of Del Mar and the Commission staff have requested additional plans, commitments, and alternatives analyses to help answer these questions. In addition, the Commission has approved two previous NCTD proposals for smaller areas of soldier pile installation in Del Mar. Permit conditions included a liability waiver, erosion controls/Best Management Practices, plans for exposed features (including staff review of materials, colors, monitoring, and maintenance plans), annual reporting, and staff review of staging and construction plans. NCTD indicates its willingness for similar measures to be applied to the subject project (which can be accomplished through a conditional concurrence with this certification, or by NCTD modifying the project to include the measures as part of the project description). NCTD has also agreed to a number of measures in an agreement with the City of Del Mar (see Exhibit 7 - NCTD letter to City of Del Mar dated December 2, 2005); these measures include commitments that NCTD and/or SANDAG will: (1) in any future stabilization effort, continue to coordinate with the City and investigate any new stabilization technologies which may become available; (2) in any future stabilization effort, further investigate alternatives (including the possible use of seawalls, and augmenting existing seawalls and re-compacting fill slope); (3) use colored concrete matching the surrounding bluffs; (4) apply the aesthetic treatment to exposed grade beams; (5) address encroachment permits and community noise issues raised by the City; and (6) based on a future study agree to remove all visible concrete (which may include seawalls and/or piling) when the tracks are relocated off the bluffs.

Based on its alternatives analysis (see pp. 12-14 and Exhibit 6 for more details), NCTD concludes that for an interim approach, the soldier piles: “are the best overall ranking alternative as it is the only alternative with a qualitative rank of ‘best’ in each evaluation category (i.e. construction cost, constructibility, environmental considerations).” NCTD has also provided information explaining why suitable sandy material would be insufficient to provide any meaningful beach replenishment (most of it is not suitable), and has agreed to notify area residents prior to any construction, particularly with respect to nighttime construction activities.

Several conditions and/or agreements are necessary to bring the project into consistency with past Commission actions and to assure the project’s continuing consistency with the applicable Coastal Act policies. These include conditions similar to those imposed by the Commission in the previous NCTD soldier pile installation in this area of Del Mar; these conditions include a liability waiver, erosion controls/Best Management Practices, plans for exposed features (including staff review of materials, colors, monitoring, and maintenance plans), annual reporting, and staff review of water quality, erosion control, staging, and construction plans. A condition is also needed to assure NCTD will abide by its (and SANDAG’s) agreement with the City of Del Mar (most of the provisions of which are linked to Coastal Act policy requirements).

Finally, the Commission staff has requested clarification that NCTD agree that any future lagging (wood beams between the soldier piles), which NCTD anticipates may be needed as soldier piles become exposed, are not part of the subject project and would not be considered at this time as “maintenance.” Rather, the Commission wishes to clarify that NCTD would need to submit to the Commission staff for its review and concurrence, and if warranted, future Commission review, future proposals for lagging, including analyses of visual effects, alternatives, and possible effects on sand supply.

The project is necessary to protect an existing facility (the rail line) from bluff erosion, is the least environmentally damaging alternative, provides for future Commission review of future project elements or current elements that may become exposed, to enable appropriate aesthetic treatment and protection of sand supply, and would, as conditioned, be consistent with the shoreline structures, geologic hazards, and public view protection policies (Sections 30235, 30253, and 30251) of the Coastal Act.

With conditions assuring that construction activities and staging areas will not affect public access, and additional conditions to minimize visual impact (which has the potential to adversely affect the quality of the recreational experience at the beach), the project would not adversely affect public access and is therefore consistent with the public access and recreation policies (Section 30210) of the Coastal Act.

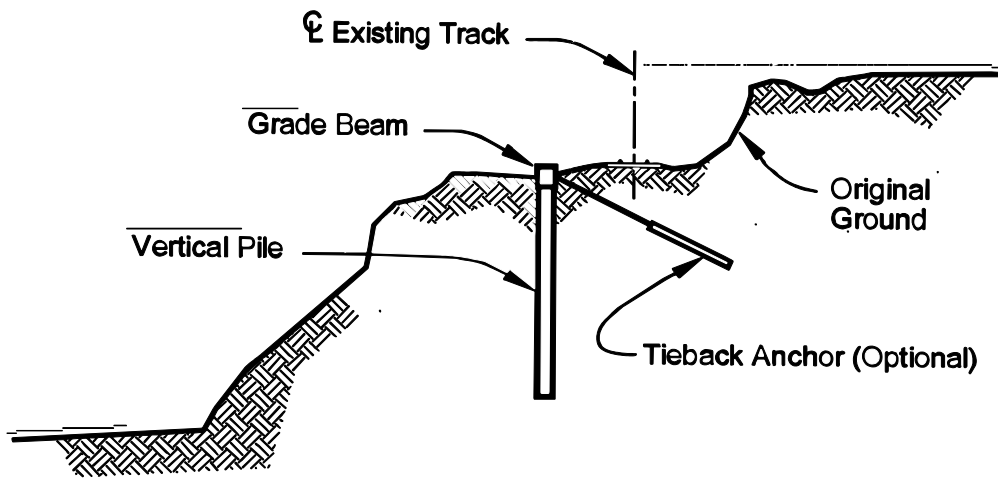
Nearby riparian wetlands would be fenced and avoided, and NCTD has provided for avoidance and protection of nearby sensitive habitats, and the project would, as conditioned, include appropriate Best Management Practices (BMPs) to minimize water quality impacts from construction and operation of the project. The project is therefore consistent with the environmentally sensitive habitat, wetlands, and water quality policies (Sections 30240, 30233 and 30231) of the Coastal Act.

I. STAFF SUMMARY AND RECOMMENDATION:

A. Project Description. The North County Transit District (NCTD) proposes to install soldier piles along approximately 1,400 linear feet of NCTD railroad right-of-way (ROW) in the City of Del Mar. The soldier piles would be installed at eight separate locations within an approximately 1.6-mile-long section of ROW extending along the bluffs from 15th Street south to near the City of Del Mar/City of San Diego boundary (Exhibits 1-5). Bluff stabilization would only be installed in areas currently in need of stabilization where bluff instability could potentially affect operation of the existing railroad tracks. Depending on NCTD's review of (future) contractor bids, less than 1,400 feet of bluff stabilization may be undertaken; NCTD has prioritized the area from segments 1-12 (Exhibits 3-4), and if sufficient funds are not available, the lower priority segments may not be installed.

The project purpose is to improve bluff stability. Soldier piles are essentially underground, reinforced concrete columns. Spacing the soldier piles along a bluff provides improved support, provided that the soldier piles are anchored in a relatively stable geological formation. The soldier piles would be approximately 30 to 36 inches wide, would be spaced approximately 10 feet on center (i.e., ten feet from the center of one pile to the center of the next) to create a "soldier pile wall." The spacing of individual piles may vary by a few feet in either direction based on site-specific conditions (such as the need to avoid drilling through existing trackside facilities or drainage structures). Based on the extent of proposed bluff stabilization and the average 10-foot spacing, up to approximately 145 piles may be installed.

The soldier piles would be 30 to 60 feet in depth, enabling the piles to be anchored in the relatively stable Delmar geologic formation. Additional bluff stabilization would be provided through the installation of a grade beam at the top of the soldier pile wall. A grade beam is a beam that connects the top of one soldier pile to the next, creating a "cap" along the top of the wall. This grade beam would be constructed of reinforced concrete. In some locations it is necessary to further increase the stability provided by a soldier pile wall through the use of tie-backs, which anchor the grade beam and soldier pile into the slope with grouted steel bars. The extent of tie-backs that would be used would not be determined until final design. A typical cross-section of the proposed soldier piles, including a grade beam and tie-backs, is shown below.



Typical Cross Section

With the exception of the southernmost proposed bluff stabilization area (SA-10E), the soldier piles would be located west (seaward) of the railroad tracks. At SA-10E, the soldier piles would be constructed just inland of the railroad tracks. Soldier piles typically would be installed 11 to 15 feet from the centerline of the railroad tracks. In all cases, soldier piles would be installed completely within NCTD's ROW.

Excavated material would be disposed at an off-site location such as a landfill or construction site (NCTD anticipates the excavated material will be suitable for use as construction fill).

Because installation during active rail use is most likely infeasible, most construction activities would occur at night/early morning when train traffic is much lower than during the day. In order to avoid rail traffic (e.g., freight trains, Amtrak and the Coaster), installation would occur between 12:00 a.m. and 5:30 a.m. each weekday morning. If NCTD busses evening passengers around the Del Mar Bluffs, installation could start earlier, extending from approximately 9:30 p.m. until 5:30 a.m. the following morning (with some minor interruptions for nighttime freight trains). (If bussing is used, it would occur on Monday, Wednesday and Thursday evenings.)

B. Background. The Commission has issued emergency permits (with corresponding follow-up regular coastal development permits) for two previous NCTD soldier pile installation projects in this area of Del Mar. In CDP 6-01-081, the Commission authorized installation of 12 soldier piles between 7th and 8th Streets, and in CDP 6-96-156, the Commission authorized 24 soldier piles at 13th St. The first of these projects included visual treatment for the top of the exposed piles, so the project would blend in with the surrounding terrain. The Commission also imposed a number of conditions in 6-01-081, including a liability waiver, erosion controls/Best Management Practices, plans for exposed features (including staff review of materials, colors, monitoring, and maintenance plans), annual reporting, and staff review of staging and construction plans.

Since those coastal development permits, NCTD has taken the procedural position discussed below that it does not require coastal development permits for its improvements to the tracks, but rather that they are, based on a recent decision issued by the Surface Transportation Board, only subject to federal consistency review. Accordingly, for the subject project, NCTD submitted a Consistency Certification to the Commission in 2004; however it extended the time for Commission review pending coordinating with the City of Del Mar. Several of the City's concerns, which are similar to the Commission's concerns, were whether removal of the soldier piles in the event the rail line is relocated inland would be more damaging, as well as aesthetic concerns about what the soldier piles (and if needed, lagging) will look like once they are exposed. In response to the City's concerns, NCTD and SANDAG have committed in writing (Exhibit 7) to: (1) continue to coordinate with the City and investigate any new stabilization technologies which may become available in any future stabilization effort.; (2) further investigate alternatives (including the possible use of seawalls, and augmenting existing seawalls and re-compacting fill slope) in any future stabilization effort.; (3) use colored concrete matching the surrounding bluffs; (4) apply the aesthetic treatment to exposed grade beams; (5) address encroachment permits and community noise issues raised by the City; and (6) this project's partial removal, in the event the track are relocated.

C. Procedures – Permitting Issue. The project triggers federal consistency review because it involves federal funding. The Commission also believes it is subject to the permitting requirements of the Coastal Act; however, NCTD disagrees with this position. Notwithstanding this disagreement about whether coastal development permits are needed, the Commission concurs with this consistency certification because it is consistent with Chapter 3 of the Coastal Act. The Commission notes that the NCTD has applied for a number of permits for its rail improvement activities in other sections of the coast, including, CDP's No. 6-02-102 (NCTD drainage improvements, Del Mar), 6-01-64 (NCTD - Balboa Avenue), 6-01-108 (NCTD - Tecolote Creek), 6-01-081 (NCTD soldier piles, Del Mar), 6-97-062 (NCTD drainage improvements, Del Mar), 6-96-156 (NCTD soldier piles, Del Mar), 6-93-60 (NCTD - Del Mar), 6-94-207 (NCTD - Solana Beach), 6-93-106 (NCTD – Carlsbad), and 6-93-105 (NCTD - Camp Pendleton). When the Commission staff requested clarification of why NCTD previously agreed (but no longer agrees) to apply for coastal development permits, NCTD stated:

Del Mar Bluffs Stabilization Project 2 is a federally funded project that NCTD is carrying out on behalf of the Federal Transit Administration. Because of this federal component, seeking a Coastal Consistency Waiver or Certification if appropriate. In addition, NCTD bases its position on the Surface Transportation Board decision and the federal laws and regulations underlying that decision.

At the start of Del Mar Bluffs Stabilization Project 1, and prior to the referenced Surface Transportation Board decision, NCTD entered into a Memorandum of Understanding (MOU) with the City of Del Mar regarding how permits and related environmental compliance requirements would be addressed. That MOU called for NCTD to process Project 1 through the City of Del Mar's approved Local Coastal Program. Because Del Mar

Bluffs Stabilization Project 1 also affected coastal resources under state jurisdiction, it made sense to process a concurrent permit application through the California Coastal Commission.

D. Applicant's Consistency Certification. The North County Transit District certifies the proposed activity complies with the federally approved California Coastal Management Program and will be conducted in a manner consistent with such program.

E. Applicable Legal Authorities. Section 15 CFR § 930.4 of the Federal Consistency regulations provides, in part, that:

(a) Federal agencies, applicants, persons and applicant agencies should cooperate with State agencies to develop conditions that, if agreed to during the State agency's consistency review period and included in a . . . Federal agency's approval under Subparts D, E, F or I of this part, would allow the State agency to concur with the Federal action. If instead a State agency issues a conditional concurrence:

(1) The State agency shall include in its concurrence letter the conditions which must be satisfied, an explanation of why the conditions are necessary to ensure consistency with specific enforceable policies of the management program, and an identification of the specific enforceable policies. The State agency's concurrence letter shall also inform the parties that if the requirements of paragraphs (a)(1) through (3) of the section are not met, then all parties shall treat the State agency's conditional concurrence letter as an objection pursuant to the applicable Subpart and notify, pursuant to §930.63(e), applicants, persons and applicant agencies of the opportunity to appeal the State agency's objection to the Secretary of Commerce within 30 days after receipt of the State agency's conditional concurrence/objection or 30 days after receiving notice from the Federal agency that the application will not be approved as amended by the State agency's conditions; and

(2) The Federal agency (for Subpart C), applicant (for Subparts D and I), person (for Subpart E) or applicant agency (for Subpart F) shall modify the applicable plan, project proposal, or application to the Federal agency pursuant to the State agency's conditions. The Federal agency, applicant, person or applicant agency shall immediately notify the State agency if the State agency's conditions are not acceptable; and

(3) The Federal agency (for Subparts D, E, F and I) shall approve the amended application (with the State agency's conditions). The Federal agency shall immediately notify the State agency and applicant or applicant agency if the Federal agency will not approve the application as amended by the State agency's conditions.

(b) If the requirements of paragraphs (a)(1) through (3) of this section are not met, then all parties shall treat the State agency's conditional concurrence as an objection pursuant to the applicable Subpart.

F. Staff Recommendation and Motion. The staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission **conditionally concur** with the North County Transit District's consistency certification CC-048-04 that, if modified in accordance with the following conditions, the project described therein would be consistent with the enforceable policies of the California Coastal Management Program (CCMP).

Staff Recommendation:

The staff recommends a **YES** vote on the motion. Passage of this motion will result in a conditional concurrence with the certification and adoption of the following resolution and findings. An affirmative vote of a majority of the Commissioners present is required to pass the motion.

Resolution to Conditionally Concur with Consistency Certification:

The Commission hereby **conditionally concurs** with the consistency certification by the North County Transit District, on the grounds that, if modified in accordance with the following conditions, the project described therein would be consistent with the enforceable policies of the CCMP.

Conditions:

- 1. Liability Waiver.** NCTD shall execute an agreement similar to that required by the Commission in CDP 6-01-081 (see Exhibit 8) under which NCTD assumes risk, waives liability, and indemnifies the Commission.
- 2. Erosion Controls.** NCTD shall submit plans to the Executive Director for his review and concurrence, prior to commencement of construction, which provide for erosion controls and Best Management Practices to minimize erosion and protect coastal waters.
- 3. Future Soldier Pile/Grade Beam Exposure Plans.** In the event any project features initially proposed for burial but which subsequently become exposed to public view from the public beach below the site, NCTD shall submit plans to the Executive Director, for his review and concurrence, that provide for visual and aesthetic treatment plans similar to those required by the Commission in CDP 6-01-081 (see Exhibit 8). The aesthetic treatment shall provide that exposed materials match the surrounding terrain to the extent feasible and minimize visual impact of the exposed

features. The review process shall provide for Commission staff review of materials, colors, monitoring, and maintenance plans.

4. **Annual Reporting.** NCTD shall provide for annual monitoring and reporting, consisting of an annual evaluation of the condition and performance of the soldier piles and grade beams, addressing whether any exposure and/or significant weathering or damage has occurred that would render them visible from the public beach or would adversely affect the future performance of the piles. This evaluation shall include an assessment of the color and texture of the soldier piles and grade beams, comparing the appearance of the structures to the surrounding native bluffs. The annual report shall be submitted to the Executive Director by May 1 of each year (beginning the first year after construction of the project is completed) for a period of three years, and then each third year following the last annual report, for the life of the project. In addition, reports shall be submitted in the Spring immediately following a major storm event or major earthquake (e.g., earthquake of magnitude 5.5 or greater with an epicenter in San Diego County or offshore).
5. **Construction Staging.** Prior to commencement of construction NCTD shall provide to the Executive Director, for his review and concurrence, plans for staging and construction. The plans shall provide for fencing to protect environmentally sensitive areas and wetlands, and for minimizing effects on public access and public views.
6. **Agreement with City of Del Mar.** NCTD shall memorialize its agreement with the City of Del Mar by incorporating the measures agreed to in its letter dated December 2, 2005 (Exhibit 7), as modifications to the project for purposes of Coastal Commission federal consistency review. Briefly, these agreements include commitments that NCTD and SANDAG will: (1) continue to coordinate with the City and investigate any new stabilization technologies which may become available in any future stabilization effort; (2) further investigate alternatives (including the possible use of seawalls, and augmenting existing seawalls and re-compacting fill slope) in any future stabilization effort; (3) use colored concrete matching the surrounding bluffs; (4) apply the aesthetic treatment to exposed grade beams; (5) address encroachment permits and community noise issues raised by the City; and (6) based on a future study, agree to remove all visible concrete (which may include seawalls and/or pilings) when the tracks are relocated off the bluffs.
7. **Future Lagging of Exposed Piles.** NCTD understands and agrees that any future lagging proposals are not specifically authorized in this conditional concurrence, but rather will need to be submitted to the Commission staff for its review and concurrence prior to installation (or in the event of an emergency, as soon as possible after installation). NCTD further understands that Commission staff review may entail analysis of visual effects, alternatives, and possible effects on sand supply, and may, if the Commission staff believes warranted, entail additional Commission-level public hearings and review.

8. **SANDAG.** SANDAG shall agree to be a co-applicant with NCTD for purposes of compliance with the commitments and conditions described in this report.

G. Right of Appeal (in the event the conditional concurrence is treated as an objection):

If NCTD does not agree to the above conditions, pursuant to 15 CFR Part 930, Subpart H, and within 30 days from receipt of notice of the Commission's action, NCTD may request that the Secretary of Commerce override this objection. In order to grant an override request, the Secretary must find that the activity is consistent with the objectives or purposes of the Coastal Zone Management Act, or is necessary in the interest of national security. A copy of the request and supporting information must be sent to the California Coastal Commission and the Federal Transit Administration. The Secretary may collect fees from the NCTD for administering and processing its request.

II. Findings and Declarations.

The Commission finds and declares as follows:

A. Shoreline Structures/Geologic Hazards. Section 30235 of the Coastal Act provides, in part:

Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal-dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply.

Section 30253 provides that new development shall:

(1) Minimize risks to life and property in areas of high geologic, flood, and fire hazard.

(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs.

NCTD states:

The coastal bluffs supporting NCTD's rail alignment in the City of Del Mar are subject to ongoing erosion and failures that could threaten the viability of rail service. In 1998, NCTD initiated a multi-phase approach to preserving the trackbed. To date, several construction projects have been completed, including surface and subsurface drainage improvements in 1998 and 2003 and an emergency repair project completed after a bluff failure in 2001. Although these actions have helped preserve the rail alignment, additional trackbed support is required. A recent geotechnical study commissioned by NCTD entitled "Supplemental Geotechnical Evaluation and Determination of Site Specific Conceptual Repair Alternatives" (Leighton and Associates 2003) identified 12 distinct areas of the bluffs that are currently in need of stabilization due to inadequate factors of safety for slope stability.

It is critical that NCTD implement a means of stabilizing the bluffs and preserving trackbed support in order to maintain the use of the existing railroad tracks. These tracks are part of the Los Angeles to San Diego (LOSSAN) rail corridor and represent the only operating rail link to southern San Diego County. The NCTD-owned and operated railroad tracks are used by commuters (on NCTD's Coaster), inter-city and long-distance travelers (on Amtrak) and freight trains (Burlington Northern and Santa Fe Railway). Loss of this rail link would have devastating social and economic impacts to the region. Furthermore, NCTD is required by the terms of a Shared Use Agreement with Amtrak and Burlington Northern and Santa Fe Railway Company to "efficiently maintain its rail line for both interstate and intra-state rail traffic."

NCTD's 2001 Geotechnical Study characterized the nature and cause of bluff erosion, identified and prioritized areas in need of stabilization and, reviewed stabilization alternatives. The study concluded that the bluffs are subject to failure due to inadequate lateral support, storm wave action and significant seismic activity, with further contributions from groundwater seepage and inadequate surface drainage. The study recommended removing groundwater from the bluffs to improve their stability; however, the report noted that even under drained conditions, efforts to provide lateral support and protect the existing support would still be necessary.

In response to the recommendations of the 2001 study, NCTD designed two separate Del Mar Bluffs stabilization projects. "Project 1," constructed in 2003 (and approved by the Commission in CDP 6-02-102), included the installation of surface and subsurface drainage improvements and a landslide warning system. NCTD designed "Project 2," the subject project, as an interim measure (i.e., to provide protection for approximately 20 years) to consist of installation of stabilization measures intended to preserve trackbed support in high-priority areas. NCTD's interim goal is to maintain the viability of rail operations for the next 20 years. In addition to the above planned projects, NCTD constructed an emergency repair project in late 2001 after a failure of the bluffs near the terminus of 8th Street (Commission CDP 6-01-081).

The development of Project 2 required further geotechnical evaluation of the bluffs and identification of viable site-specific bluff stabilization alternatives, which are contained in NCTD's 2003 Supplemental Geotechnical Evaluation, which NCTD included in its submittal of this consistency certification in July 2004. This submittal raised a number of questions, both from City of Del Mar engineers and from the Commission staff, about alternatives, long term plans (both in terms of the soldier piles themselves, and the tracks they have been designed to support), visual impact, sand supply, and several other issues. Most fundamentally, the inevitable continuing erosion of the bluffs may make retention of the rail line in this right-of-way infeasible in the long term, and will certainly result in further exposure of the piles in the intermediate term. Accordingly, significant questions raised by the project include:

- (1) What will happen when the buried soldier piles become exposed?
- (2) Will installing the piles into the bluff preclude options for long-term solutions?
- (3) In the event the long-term plan is to relocate the tracks, will the piles be removed?
- (4) If so, when and how will they be removed, and can they be removed without further destabilize the bluff?

Both the City of Del Mar and the Commission staff have requested additional plans, project justifications, commitments, and alternatives analyses to help answer these questions. In response to project need (i.e., the current threat to the integrity of the rail line), NCTD states:

Bluff instability is an ongoing problem that could affect rail service at any time. The coastal bluffs supporting the rail alignment have a documented history of landslides and surficial failures; however, there is no accurate method to predict when bluff failures will occur. The bluffs are subject to continuous erosion and recurrent failures. These bluff failures threaten the viability of the rail alignment, especially those that occur within designated "high-priority areas" where, in some locations, the track centerline is within 13.5 feet of the bluff edge. The extent of the problem is such that NCTD recently installed a \$300,000 landslide warning system along the bluffs.

Addressing questions about alternatives, NCTD states:

For each of the high-priority areas, the Supplemental Geotechnical Evaluation evaluates the viability of potential bluff stabilization alternatives, including retaining walls, seawalls, soil cement buttresses, soil nail reinforcement and soldier pile walls (described briefly below and in more detail in the TSR). Not every potential stabilization alternative would work at each high priority area; however, for each high-priority area, at least two of these potential alternatives could provide stabilization for 20 years. The TSR builds on previous work by evaluating these viable stabilization alternatives (and refines the limits of some of the previously identified high priority areas).

As part of the development of the TSR, preliminary structural and geotechnical analyses were conducted for each high-priority area, and these form the basis for evaluations of the various alternatives' constructibility, construction cost and environmental considerations. The TSR uses the results of these evaluations to select the best stabilization alternative for each high-priority area.

HIGH-PRIORITY STABILIZATION AREAS

Table S-1 lists (in order of priority) the 14 high-priority areas and the viable bluff stabilization measures addressed for each area in the TSR. (The "Stabilization Area" designations in the table, originally used during preparation of the geotechnical studies, were assigned prior to development of the priority rankings.) Figure S-1 shows the general locations of these areas on an aerial photograph base.

Priority	Stabilization Area	Length (ft)	Soldier Piles	Soil Cement Buttress	Soil Nails	Seawall	Retaining Wall
1	SA-5	350	X	X			
2	SA-6A	85	X	X			
3	SA-4	195	X	X			
4	SA-10E	50	X	X			X
5	SA-1	404	X			X	
6	SA-7	107	X		X		
7	SA-2	81	X	X			
8	SA-9B	125	X		X		
9	SA-6B	115	X	X	X ²		
10 ¹	SA-8A	72	X	X			
10	SA-8B	35	X	X			
10	SA-10W	145	X	X			
11	SA-3	55	X	X		X ³	
12	SA-9A	600	X		X		
Total Length = 2,419							

- Notes:**
1. SA-8A, SA-8B, and SA-10W are all ranked equally as priority 10
 2. Soil nails are viable for the southern 81 feet of SA-6B
 3. Extension of the existing seawall is considered as a part of the soil cement buttress alternative

Further details showing the designs (cross sections) for the various alternatives, and NCTD's segment-by-segment analysis of the most appropriate alternative, are included in Exhibit 6. This analysis concludes:

Table S-2. Summary of Alternatives Evaluation

Stabilization Alternative	Evaluation Criteria			Overall Rank
	Constructibility	Construction Cost	Environmental Considerations	
Soldier Pile	Best	Best	Best	Best
Soil Cement Buttress	Worst	Mid-Level	Worst	Worst
Soil Nail Reinforcement	Mid-Level	Best	Mid-Level	Mid-Level
Seawall	Worst	Mid-Level	Worst	Worst
Retaining Wall	Mid-Level	Mid-Level	Best	Mid-Level

Notes: **Best** = Most Constructible, Lower Construction Cost and/or Lowest Potential Environmental Impact
Mid-Level = Moderately Constructible, Mid-Range Construction Cost and/or Mid-Level Potential Environmental Impact
Worst = Least Constructible, Higher Construction Cost and/or Highest Potential Environmental Impact

As noted in Table S-2, the soldier pile and retaining wall alternatives are rated as “best” with regard to environmental considerations. The identification of these as the environmentally preferable alternatives reflects their comparatively low visibility and that they would have the smallest footprints of disturbance, would not alter the face of the bluffs, would neither require the use of the beach during construction nor result in a long-term reduction of usable beach area, and would not directly affect coastal processes. Construction noise might disturb nearby residents, but this would be a short-term effect. Architectural treatments could be utilized to minimize the visual impact of soldier piles in the event that they would be visible from the beach or become visible (due to erosion or other bluff face failure) in the future.

Since the soldier pile alternative is ranked the best for constructibility, construction cost, and environmental considerations, it is also the best overall solution.

Thus, NCTD concludes that for an interim approach, the soldier piles: “are the best overall ranking alternative as it is the only alternative with a qualitative rank of ‘best’ in each evaluation category (i.e. construction cost, constructibility, environmental considerations).” To address future plans for future exposed features and future removability if the tracks are relocated, NCTD has also agreed to a number of measures in an agreement with the City of Del Mar which includes commitments that NCTD and SANDAG will: (1) in any future stabilization effort, continue to coordinate with the City and investigate any new stabilization technologies which may become available; (2) in any future stabilization effort, further investigate alternatives (including the possible use of seawalls, and augmenting existing seawalls and re-compacting fill slope); and (3) based on a future study agree to remove all visible concrete (which may include seawalls and/or piling) when the tracks are relocated off the bluffs, as follows:

NCTD understands that SANDAG has agreed to the following commitment:

When the environmental document for the removal of the Coaster tracks along the Del Mar Bluffs is prepared, the document will study the removal of all visible piling and in-fill walls to the extent feasible without jeopardizing public safety or private property.

Furthermore, as a condition of moving forward with the Del Mar Bluffs Stabilization project and based on the conclusions of the study, SANDAG will agree to remove all visible concrete (which may include seawalls and/or piling) when the tracks are relocated off the Bluffs.

Concerning sand supply (i.e., use of excavated material for beach replenishment), NCTD states:

Based on the characteristics of the excavated material, as well as the relatively small amount of sand-bearing material that would be excavated, NCTD does not propose to pursue beach nourishment as part of this proposed action.

In addition to the above, the Commission has approved two previous NCTD proposals for smaller sections of soldier pile installation in Del Mar. Permit conditions included a liability waiver, erosion controls/Best Management Practices, plans for exposed features (including staff review of materials, colors, monitoring, and maintenance plans), annual reporting, and staff review of staging and construction plans. Similar conditions and/or agreements are necessary to bring the project into consistency with past Commission actions and to assure the project's continuing consistency with the applicable Coastal Act policies, and NCTD has indicated its conceptual willingness for similar measures to be applied to the subject project. A condition is also needed to assure NCTD will abide by its (and SANDAG's) agreement with the City of Del Mar (most of the provisions of which are linked to Coastal Act policy requirements). Finally, the Commission staff has requested clarification that NCTD agree that any future lagging (wood beams between the soldier piles), which NCTD anticipates may be needed as soldier piles become exposed, are not part of the subject project and would not be considered at this time as "maintenance." Rather, the Commission wishes to clarify that NCTD would need to submit to the Commission staff for its review and concurrence, and if warranted, future Commission review, future proposals for lagging, including analyses of possible effects on sand supply. Implementation of the measures discussed in this paragraph could be accomplished either through a conditional concurrence with this certification, or through NCTD modifying the project to include the measures as part of the project description.

The Commission concludes that project is necessary to protect an existing facility (the rail line) from bluff erosion, is the least environmentally damaging feasible alternative for an interim (20 year) approach, provides for future Commission review of future project elements or current elements that may become exposed, and would, as conditioned, be consistent with the shoreline structures and geologic hazards policy (Section 30235 and 30253) of the Coastal Act.

B. Public Views. Section 30251 of the Coastal Act provides:

The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration

of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

NCTD states:

The proposed action would consist of structural elements installed almost completely below grade (i.e., underground), with limited surface visibility. In addition, native material would be used to backfill holes and trenches not filled with concrete, further helping to minimize the visibility of the soldier piles and grade beams. The portion of a soldier pile wall that might be visible would be the grade beam. In most areas (including SA-1 near the City of Del Mar's Seagrove Park), the top of the grade beam would be at or close to the existing ground level, leaving only the top of the grade beam exposed. In some locations, up to approximately three feet of the concrete grade beam might be exposed on its west side.

Views to the grade beam from inland areas would be intermittent. Seagrove Park and the termini of some City of Del Mar streets along the eastern edge of the ROW would allow pedestrian views to the top of the grade beam. Although the top of the grade beam could be visible from these areas, it would not draw viewers' attention because it would be parallel to the existing railroad tracks (which include the rails, ties and ballast rock) and because most views would be directed toward the beach and/or ocean, not the NCTD ROW. Views to the grade beam from residences/back yards inland of the ROW would, for the most part, be obstructed by intervening topography. Views from these residences/back yards would also primarily be directed toward to ocean, not the railroad ROW.

The grade beam may be visible by passengers on passing trains (such as Amtrak or the Coaster), but only for extremely short periods of time for any given passenger and probably only for passengers on the trains' lower levels. With regard to beach-goers, the potential for views to soldier pile walls would depend on the specific stabilization site and the bluff topography between that site and the beach. In general, however, views from the beach to the grade beam would be obstructed by topography. Views to SA-10E, the only proposed stabilization area inland of the railroad tracks, are possible from the south-bound "lanes of Camino del Mar to the east. south-bound travelers' views, however, typically are more focused south toward Los Penasquitos Lagoon and Torrey Pines State Beach. Furthermore, even if southbound travelers (such as passengers in vehicles) are facing west, views from a moving vehicle to SA-10E would be fleeting.

If no future actions are taken to prevent erosion, it is probable that some portion of the soldier piles ultimately would be exposed. Given the variability of factors involved in erosion, it would be highly speculative to state when and where sections of the soldier piles could be exposed in the future. The specific actions that would be taken should a section of soldier piles be exposed by erosion would be determined when and if the piles are exposed, taking into account the location, nature and extent of the exposure. Measures that might be considered at that time could include attaching a sandstone facing (similar in appearance to the native Bay Point and/or Delmar geologic formations, as applicable) to the piles.

Based on these factors, it is expected that proposed action's visual impacts would be consistent with Coastal Act policies (Section 30251) calling for permitted development to be sited and designed "to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas."

Most of the project elements would not be visible in the short term, once construction is complete. Nevertheless, the Commission finds that several conditions and/or agreements are necessary to bring the project into consistency with past Commission actions and to assure the project's continuing consistency with the applicable Coastal Act policies. These include conditions similar to those imposed by the Commission in the previous NCTD soldier pile installation in this area of Del Mar (and to assure NCTD will abide by its agreement with the City of Del Mar). These conditions required Commission staff review of plans for exposed features (including materials, colors, monitoring, and maintenance plans), annual reporting, and of staging and construction plans. These reviews are intended to assure that NCTD will, among other things: (1) use colored concrete matching the surrounding bluffs; (2) apply the aesthetic treatment to grade beams as well as soldier piles; and (3) prepare a long-term plan for project removal in the event the track are relocated.

Finally, the Commission staff has requested clarification that NCTD agree that any future lagging (wood beams between the soldier piles), which NCTD anticipates may be needed as soldier piles become exposed, are not part of the subject project and would not be considered at this time as "maintenance." Rather, the Commission wishes to clarify that NCTD would need to submit to the Commission staff for its review and concurrence, and if warranted, future Commission review, future proposals for lagging, including analyses of visual effects.

With these conditions and clarifications, the Commission finds that the project provides for future Commission review of future project elements or current elements that may become exposed, to enable appropriate aesthetic treatment, and would, as conditioned, minimize alteration of natural landforms, protect public views, and be compatible with the surrounding area, and would thus be consistent with the view protection policy (Section 30251) of the Coastal Act.

C. Public Access and Recreation. Section 30210 of the Coastal Act provides for maximum public access to the shoreline. Concerning access issues, NCTD states:

The proposed action conforms to the public access objectives of the California Coastal Act because it would occur within an existing ROW and would not affect the beach access. Legal access routes to the beach would be maintained during construction. NCTD's existing, safety- driven prohibition on public access along its ROW may be more strictly enforced during soldier pile construction because of the increased presence of NCTD staff during this period. This temporary change would not have a significant effect on, or be inconsistent with Coastal Act policies regarding, beach access.

The proposed action would occur within an existing ROW and would not directly affect the nearby beach. Construction noise impacts would be relatively short term, and would not significantly affect recreational use of the beach. As discussed in Section 3 of this document, it is assumed that most of the construction activities would occur at night or in the early morning. This time of day generally represents a low use period for recreational uses. In addition, beach users also would have the flexibility in selecting a section of beach away from active, bluff-top construction.

Given this discussion, and with conditions assuring that construction activities and staging areas will not affect public access, and the additional conditions discussed in the previous section of this report to minimize visual impact (which has the potential to adversely affect the quality of the recreational experience at the beach), the Commission agrees with NCTD and finds that the project would not adversely affect public access and would, as conditioned, be consistent with the public access and recreation policies (Sections 30210 and 30252) of the Coastal Act.

D. Environmentally Sensitive Habitat Areas. Section 30240 of the Coastal Act provides that:

- (a) *Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.*
- (b) *Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

Addressing the potential habitat impacts, NCTD prepared a biological report identifying six sensitive habitat types in the project area (coastal bluff scrub, Diegan coastal sage scrub, Torrey pines forest, freshwater marsh, and mulefat scrub. The report concluded that the project would be limited to disturbed areas and would not adversely affect any environmentally sensitive

habitat areas. The report, which includes measures NCTD will incorporate into the project to separate construction activities from nearby sensitive habitats, contains the following discussion of habitat issues:

Construction of the proposed action would occur almost entirely on the level portions of the ROW between bluffs to the east (above the railroad tracks) and west (below the tracks). Construction would directly affect approximately 0.1 acre of native habitat and 2.1 acres of non-native, disturbed or developed habitat, for an approximate total impact of 2.2 acres. The impacts to native habitat types would include approximately 0.08 acre of coastal bluff scrub, 0.01 acre of Diegan coastal sage scrub and 0.02 acre of distichlys grassland. The impacts to other habitat types would include less than 0.01 acre of giant reed, 0.45 acre of disturbed habitat and 1.63 acres of developed areas. An unquantified amount of disturbed and developed habitat would be traversed by construction traffic.

The proposed action incorporates measures that would avoid or minimize effects to sensitive habitats. These measures include avoiding impacts to the Diegan coastal sage scrub habitat located near the southern end of the study area. Impacts to coastal bluff scrub also would be avoided, except for a minimal amount during tie-back installation and at one of the construction laydown areas, as described below. With these exceptions, Diegan coastal sage scrub and coastal bluff scrub would be flagged by a biologist familiar with these habitats and avoided during construction.

Although impacts to coastal bluff scrub would be minimized, it would not be feasible to install the tie-backs (if used) without some intrusion into (and effects on) this habitat. Additionally, a minor (less than 0.1-acre) impact to disturbed coastal bluff scrub would occur at one of the proposed laydown areas. The proposed action's minor impacts to coastal bluff scrub, Diegan coastal sage scrub and distichlys grassland would not conflict with Coastal Act policies because the habitats are too disturbed and isolated to be expected to support sensitive species and the impact areas would be relatively small. In addition, the affected areas would be seeded with a native seed mix following construction. Impacts to giant reed, disturbed and developed habitats would not be inconsistent with Coastal Act policies because they are not considered sensitive vegetation communities and do not support sensitive species.

Except as noted above, sensitive habitat (other areas of Diegan coastal sage scrub and coastal bluff scrub) would be fenced with plastic snow fencing or other clearly identifiable fencing to prevent damage from construction equipment. The specific areas to be fenced will be determined in the field and flagged by a biologist experienced in identifying the above-listed habitat types. The biologist also will inspect the fencing prior to start of construction. In the unforeseen event that any of these habitat types are adversely affected by construction despite the protective fencing, in-kind, on-site restoration (seeding or planting) would be conducted by NCTD to offset the impact. No other measures are required to avoid or minimize direct impacts to vegetation.

No sensitive animal species were observed at any of the eight proposed stabilization areas or at any of the proposed construction laydown areas. Other sensitive species are generally not expected to occur at any of the proposed stabilization areas or at proposed construction laydown areas due to the disturbances present at those locations. The coastal California gnatcatcher could potentially occur near SA-9B and SA-10E. The coastal California gnatcatcher is a listed federal- threatened species and is afforded protection under the federal Endangered Species Act. Although coastal bluff scrub and Diegan coastal sage scrub are potential habitats for coastal California gnatcatcher, the areas of coastal bluff scrub and Diegan coastal sage scrub that would be affected by the proposed action have a very low potential for gnatcatchers because they are located in an area of high human use (e.g., beachgoers, trains) and occur in relatively small, isolated patches. Also, less than 0.1 acre of coastal bluff scrub and Diegan coastal sage scrub would be affected.

Because the proposed action is expected to be implemented in late Spring/early Summer 2005, it is probable that construction would occur during the coastal California gnatcatcher breeding season (February 15 to August 31). In the event that NCTD determines construction is necessary during this period, a USFWS-protocol survey for coastal California gnatcatcher would be conducted in the Diegan coastal sage scrub areas in the southern part of the study area within 300 feet of proposed stabilization areas SA-9B and SA-10E prior to construction at those areas. If a gnatcatcher pair is located within 300 feet of SA-9B or SA-10E, construction at those locations would be postponed until after the breeding season (August 31), unless other measures are agreed to through an informal consultation with the USFWS. Similarly, the use of any construction laydown areas within 300 feet of mapped Diegan coastal sage scrub also would require pre-construction protocol surveys and related measures.

Indirect impacts to nesting raptors may occur if the proposed action is constructed during December through July. Although raptor nests were not detected during the general wildlife Survey of the project area, it is possible that raptor nests may be located along the ROW by the time construction starts (e.g., 2005). Project construction could result in indirect noise impacts to nesting raptors, if present, during the raptor breeding season extending from December 15 to July 31. If construction would begin during this breeding season, a pre-construction survey for nesting raptors would be conducted to identify active raptor nests in mature trees within 300 feet of the proposed stabilization areas and/or construction laydown areas. The survey would be conducted 30 days or less prior to the start of construction (but not before December 15). If construction begins outside the breeding season but would extend into the season, the survey for active raptor nests would be conducted at the start of the breeding season (i.e., the second half of December). No monitoring is recommended if construction occurs completely between August 1 and December 15 or if the results of the raptor nest survey are negative.

If active raptor nests are found within 300 feet of any proposed stabilization area or proposed construction laydown area, weekly biological monitoring of the nests would be conducted during the breeding season when grading/construction are ongoing to ensure that nesting raptors are not adversely affected by construction. If adverse effects are noted (e.g., as indicated by the bird leaving its nest in definite response to construction vehicle presence), construction activities will be pulled back to 300 feet away from the nest until the nest is vacated naturally.

With the implementation of the above measures, which are incorporated into the proposed action as project design features, the proposed action would be consistent with Coastal Act policies regarding environmentally sensitive habitat areas.

Concerning wetlands, NCTD identified wetlands (riparian habitat) in the project area; the project would avoid any fill of these wetlands, and temporary fencing would assure they would remain off limits to construction activities.

Wetlands

The bluff stabilization project would avoid impacts to riparian habitats, and it would not negatively affect the biological productivity of coastal waters, streams, wetlands, estuaries, or lakes, as described below.

A biology technical report prepared for the proposed action (HELIX 2004) identified two riparian plant communities in the vicinity of the proposed bluff stabilization areas: freshwater marsh and mule fat scrub. These communities are often associated with wetlands or waters of the United States that are subject to the jurisdiction of the U.S. Army Corps of Engineers pursuant to Section 404 of the federal Clean Water Act. Potential impacts to these two riparian plant communities would be avoided through temporary fencing to prevent damage from construction equipment. In the unforeseen event that these riparian plant communities are adversely affected by construction despite the protective fencing, in-kind, on-site restoration (seeding or planting) would be conducted by NCTD to offset the impact.

Given the above discussion, and with conditions providing for Commission staff review of staging and construction plans, and water quality measures (see following discussion), the Commission finds that the project would, as conditioned, avoid and protect nearby environmentally sensitive habitats and wetlands, and minimize water quality impacts from construction and operation of the project, and would, therefore, be consistent with the environmentally sensitive habitat and wetlands policies (Sections 30240 and 30233) of the Coastal Act.

E. Water Quality. Section 30231 of the Coastal Act provides:

The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

NCTD has included commitments for water quality protection in its consistency certification, stating:

Runoff

Implementation of the proposed action would not substantially alter existing on-site drainage patterns, nor would it increase runoff volumes and velocities. Upon implementation of the proposed action, runoff on the bluffs would continue to flow west, down to the beach and ocean. Drainage improvements implemented as part of Del Mar Bluffs Stabilization Project I will help reduce the extent to which current drainage patterns erode the bluffs and undermine its stability.

Installation of the proposed action would be subject to a Storm Water Pollution Prevention Plan (SWPPP), to be prepared by NCTD prior to the start of construction. The SWPPP would address construction-related erosion and sediment control measures, soil stabilization, pollutant control measures for hazardous construction materials (such as fuels and lubricants), a best management practices (BMPs) inspection and maintenance plan, and a monitoring program and reporting plan. Implementation of the proposed action would not, therefore, generate substantial additional sources of polluted runoff.

With the above measures, and as conditioned to provide for Commission staff review and concurrence of NCTD's water quality plans, the project will not cause significant water quality impacts, and the Commission finds the proposed project consistent with the water quality policy (Section 30231) of the Coastal Act.

III. Substantive File Documents

1. CC-004-05, NCTD, Second Track, San Onofre area (O-Neil-Flores), Camp Pendleton Marine Corps Base.
2. CC-086-03, NCTD, Second Track San Onofre Area, Camp Pendleton Marine Corps Base.

3. CC-029-02, NCTD, Oceanside-Escondido Rail Project.
4. NCTD Coastal Development Permits 6-02-102 (NCTD drainage improvements, Del Mar), 6-01-64 (NCTD - Balboa Avenue), 6-01-108 (NCTD - Tecolote Creek), 6-01-081 (NCTD soldier piles, Del Mar), 6-97-062 (NCTD drainage improvements, Del Mar), 6/96-156 (NCTD soldier piles, Del Mar), 6-93-60 (NCTD - Del Mar), 6-94-207 (NCTD - Solana Beach), 6-93-106 (NCTD - Carlsbad), and 6-93-105 (NCTD - Camp Pendleton).
5. Del Mar Bluffs Stabilization Project 2 - Preserving Trackbed Support, Supplemental Geotechnical Evaluation and Determination of Site Specific Conceptual Repair Alternatives" (Leighton and Associates 2003).
6. Del Mar Bluffs Stabilization Project 2 - Preserving Trackbed Support, Type Selection Report, Executive Summary, May 3, 2005, and earlier main report dated June 21, 2004 (Simon Wong Engineering and Leighton and Associates, Inc., Helix Environmental Planning, Inc., and Everest International Consultants, Inc.).